

## Acne Vulgaris:

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**General:** one of most common cutaneous disorders affecting adolescents and young adults. Significant psychological morbidity, affecting social lives, employment, and can involve disfiguring or life-long scars.

### Epidemiology/risk factors:

In adolescents ranges from 35-90%. Acne tends to resolve in the third decade. Can persist or develop de novo in adulthood. Post-adolescent acne: female predominance whereas adolescent is male predominance. Age ranges and prevalence-

**20-29:** 43%(M) 51%(F), **30-39:** 20%(M) 35%(F), **40-49:** 12%(M) 26%(F) **50+:** 7%(M) 15%(F)

External factors: Mechanical trauma (picking/rubbing) and use of soaps/detergents/estrogens→more inflammation

Drugs: include glucocorticoids, [phenytoin](#), [lithium](#), [isoniazid](#), epidermal growth factor inhibitors, iodides, bromides, androgens

**Diet:** Acne and milk ingestion-associated but all retrospective data. Chocolate-no association.

High glycemic vs low glycemic load diet- low glycemic showed benefit but could be due to weight changes

**Family history:** Increase risk x 3 for those with 1<sup>st</sup> degree family members

**Stress:** No increase in sebum production but severity of acne yes. Some evidence of CRH role in stress-exacerbated acne.

**Pathogenesis:**? Follicular hyperkeratinization, with increased sebum production and proliferation of propionibacterium acnes within the follicle, associated inflammation/rupture of follicle. Androgens can play a role in sebum production (consider hyper-androgen) states.

### Symptoms:

Diagnosis: Based on history and clinical exam

Physical: type and location of lesions, any scarring and post-inflammatory pigmentary changes. Hirsutism, menstrual irregularity or virilization. (PCOS)

Consider Ddx: Rosacea, folliculitis, pseudofolliculitis barbae, acneiform eruptions

Severity of acne:

Type 1- Mild-inflammatory-Comedonal, less than 10 lesions, no scarring

Type 2-Mild-papular acne-less than 25 lesions, face and trunk, mild scarring

Type 3-Moderate-pustular acne- >25 lesions with moderate scarring

Type 4-Severe-cystic acne-nodulocystic with extensive scarring

### Treatment:

-Wash with mild synthetic detergent cleanser (syndet) over soap 2x daily- dove, ivory, Neutrogena, cetaphil –no vigorous cleaning, warm water

**Mild categories**→Topical retinoid (normalize pattern of follicular keratinization)

--apply a thin layer to affected areas nightly- the whole face, not just spot treatment

--start with lowest dose, creams better-0.025%, 0.05% and increase as necessary

--limit sun exposure though not truly photosensitizing-adapalene best tolerated-

Topical antimicrobial: combination therapy more effective than either agent alone (recommended if inflammatory component)-

-Benzoyl peroxide, clindamycin, erythromycin- usually alternate application morning/night

with retinoid

-Topical antibiotics combined with benzoyl peroxide seems more effective and limits resistance

**Moderate-severe inflammatory categories:** Consider topical retinoid, topical benzoyl peroxide and oral antibiotic for limited course (12-18 weeks) Doxycycline 500mg BID/ or erythromycin 500mg BID- Should wait at least 6-8 weeks before changing to different antibiotic

**Severe, recalcitrant, nodular acne**→oral isotretinoin

Sources: UpToDate/ Residents Guide to Ambulatory care